

SEQUENCE LISTING



(1) GENERAL INFORMATION:

(i) APPLICANT: DE LEON, F. Abel Ponce
CIUFO, Stacy
ROBL, James M.
AMBADY, Sakthikumar
SMYTH, JR., J. Robert

(ii) TITLE OF INVENTION: Z-CHROMOSOMAL MARKERS DERIVED FROM
CHICKEN (GALLUS DOMESTICUS) AND USE THEREOF IN CHROMOSOMAL
MAPPING

(iii) NUMBER OF SEQUENCES: 19

(iv) CORRESPONDENCE ADDRESS:

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(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.30

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: US 60/034,410
(B) FILING DATE: 02-JAN-1997
(C) CLASSIFICATION:

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Teskin, Robin L.
(B) REGISTRATION NUMBER: 35,030
(C) REFERENCE/DOCKET NUMBER: 002076-001

(ix) TELECOMMUNICATION INFORMATION:

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(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 215 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

GATCACTTTC CCTAATATTC TTGTGTTCT TGTTGTTGA CCTGTAATGC AGTTCTGAGT 60
TTTGGAAAGG AACTAATTAA GACCAGAGGA GAGATAATT TCTTTATCA AAAAACAAAC 120
AAACAAACAA AAAAACGAAT TCTTACCACT TTACAAAAAT TTTCCATTTC GAAGGCCAGT 180
ACAGCCATAG CATTCATCTA CTTTTTGCTT TGGAT 215

(2) INFORMATION FOR SEQ ID NO:2:

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(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 482 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

GATCAGGTGG CCTGTAGTAG ACAACAAACAA CAATGGGTG CCCTTGTTG CCTTAGTCTC 60
TAACTCGCAC CCACACACAC TTTCAAGTTG CTTGTGGCCA TTCTTCAGGG ACAGTTCTC 120
ACAATCTATT CCTTCCTGA TGTAGAAGGC GTCACCTCCT CCCCTCCTGC CTCGTTGTC 180
CCTTCTAAC TGCAGGTATT AGTATTGATA GCTAAGGTCA AGTCATGGGA ACCATCTCAC 240
CAGGTTTCAG TGTTGGCAAC TATGTTATGC TTTCTTAGGA GCATGGTGGT TCCAACTCTT 300
CCCTGCTTAT TTCCCAAGCT GTGTGTGATG GTAGGATAGC ATTCAAGTGG GAGGAGCCTA 360
TCGGCTTTT GGAGGTACTC CTAAATCCCT GATATTCCCC TGATTCCGT ACTTCTTCCT 420
TGCCAAGGGC CCGCCAATGC ATAGTTCAAT TTCTCATGCA GACGCTAAGG AAAGGTGGAC 480
CC 482

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 285 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

| | |
|---|-----|
| GATCGTATGT ATTTTTTAC ATAGGATAGA AAATGGCCAA TAGGAAATAA GACAGTACAG | 60 |
| CTACTAAGAA AGAAACACAA TTACACACAC ACACACACAC ACACACACAC ACACATTTGA | 120 |
| AAAACGCGCT GCACAGCAGT GTGGGTATT TTTCACAAGA GAGACACACT CTACAGTACA | 180 |
| CAGCCAGCTC TACCTTGTCG CACAGTCTCA GTGTGTGTTT GCCAACAGGA CGCGGTTCAC | 240 |
| AGGGAGATAT TGTCCCTTTG TGTGTGTGGA GACACAGAGA CAGAG | 285 |

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 355 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

| | |
|---|-----|
| GATCCCCCTGG AGGAAGGGCA ATGGCAACCC ACTCCAGTAT TCTTGCCCTGA AGAATACCAT | 60 |
| GGTCAGTTT GCCTCCTGGG CTATAGTCCA TGGGGTTGCA AAGAGTCAGG CATGACTGAG | 120 |
| CGACTCTCTC TCTCTCTCTC TCTCTCTCTC ACACACACAC ACACACACAC ACACACGGCG | 180 |
| TCTCTCTCTC TCTCTATACA TATAGGCTGT GTGTCTCGCT ATTCTCACAT GAGGGAAACT | 240 |
| CATATCTAGC ACGTGGCACA AATATTGTTT GTGGCTCTCA CAAAAGACAT GTGGGCGCAC | 300 |
| AAAGGTCCCC CCCCGGTGGA TACANCGCCT TGGTTTTTA TAACCCAAGC CTGTG | 355 |

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 196 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

GATCACATAT GTAAACTAGG GAATTGCATA ATAAGATTAA ATGTAGGTGT AGAACGTGGC 60
ATGAAGGAAG GTAGAATTAG GTGGTACCTA TCTCTTCTGA AACAAACTGA GAATCCTACT 120
ACCAATCAAC ATATTCTACA TACCACACAC ACATTTTTTC TCGAGTAAAA TATAAACTAA 180
TGAGAAACTT CCCTAG 196

(2) INFORMATION FOR SEQ ID NO:6:

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(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 474 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

GATCCAAGC AACACATAGN CAGACAATCA CACACACACA CACACACACA CACACACACA 60
CACACACACA CACATCCTCT CCCACAAATA CATCCGAGA GGGGGGAGAG ACACTCTCTC 120
TCCCTCTCTA TAGGGGAGAC CCGGAGAGCT GGCTCTGTTG TCTCTCTACA CCGGACATAC 180
AGTGGAGCAC ATCTCACACT TGTGTCTTTG TCTCTCTACA CCGGACATAC AGTGGAGCAC 240
ATCTCACACT TGTGTCTCTA TCTCTCCCTG TCCCTGTTGA TCCATCTCTC TTCACACATC 300
TCTCCAGATC TTAGCGCTAG AGTCTCCTGT CTTCTCTCTG CGCAATTGT GTGATAGAGA 360
CACCTGATAT GTTGTGTGGG GGAGACATCT GTGTGTCTCT GTGTCATCCC AGAGGATTT 420
TCTCTCCAC ACTTAGAGGC CTTCTCAAGA GATGGGAGGT TTTAATGGGG TGTG 474

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 146 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

GATCATTCTT CTGTTTCCCA TTCTAATGGG AATTCTCCAC ACACACACAC ACACACACAC 60
ACACACACAT CTTCTTCCCC TTACATGGAA AAAAATCCTC CACACCCCTG GACACTGATT 120
ACTCTCCCTC TTCCCAGAGA GAGATC 146

(2) INFORMATION FOR SEQ ID NO:8:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 422 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

GATCCCCTAG AGAAGGGAAT GGCTACTCAC TCCAGTATTG TTGCCTGGAG AATTCCGTGG 60
TCAGAGGAGC CTGGAAGGCT ATAATCCATA GAGTCGCAAG AGTCAGACAG GACTGAGTGA 120
CTAACACACA CATGCACACA CACACACACA CACACACACA CTTGCTCTAG GGAGAGGCAT 180
AGAGATGTA TCTCTCCTAA AATGGGGTG GCGATGGCCC CTGCGGCCAA GTAATGCCA 240
CACATGCGTA TTCCCCTTAA GATTGGGTTA GGCCCTCCCTT ATGAGGAGAG ACCAGGGAGA 300
GAATGGGCTC TCTCTCTCTC TCACTCCCCA ACCGAGTAAG TGGTAAAAAA GTTTTCCTG 360
GATTACAATT TTGGTGTAC AGAATTGGAA AAAAATATTG TTGGGCTCC CCCCTCAGTT 420
TA 422

(2) INFORMATION FOR SEQ ID NO:9:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 280 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

CTAGCAAAAA CACCCCCACA AGTTATGAAA ACAACGGCTT AATATAGTAA TGTGTGTGTG 60
TGTGTGTGTG TGTTGCACAC CACAGTTTC TCTGATACTC AAACCTCTCT CTTTCTCTAC 120

AGGGGCCCCC CATAACACAG CGGCTGAGAT GTGTGACGGG AAGGCGTGGC CTTTTACACA 180
TTTGTGGTAT GGTCTGCCAA GGCCCCCTAT TGCCCCCCAC AACTACGGAG ATACACTAGG 240
GGCGACCCGC AGGCGCGCGA CCCCCAGGTG GGGCCCCGAG 280

(2) INFORMATION FOR SEQ ID NO:10:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 478 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: DNA (genomic)

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

CTTTAGGAGG TTCTCTCGAG TAAGCTTTT GGATTCTTT GGTTCCAAG CATCACATGG 60
TACAGGCAGT CACACACACA CACATACACA CACACACACA CACACACACA CACTCCTCTC 120
CCCACAAATAC ATACCGAGAG GGGGGAGAGA CACTCTCTCT CCCTCTCTAT AGGGGGAGCC 180
CCACAGAGCT GGCTCTGTTG TCTCTCTCCA CCGGACATAC AGTGGAGCAC ATCTCACACT 240
TCTGTCTCTA TCTCTCCCTG CCCCTGTGAC ATCCATCTCT CTTCACACAA TCTCACCCAG 300
GATCTTAGCG CTAGAGACCC CCTGTCCTTC TTCTCCTGGG GAAATTTTT GTGGATAAGA 360
GACACCCGAT ATATTGGTGT GGGGGAGAAC ATCTTGTGAG GTCTCTGTTG TGCCATCCCA 420
ACAGGAATT TTATCTCCCC CACAATTAGA GGCCCCCTCCT CAAGAGTGTG TGAGGGTT 478

(2) INFORMATION FOR SEQ ID NO:11:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 198 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

GATCACAGAT GTATGTATTT TTTTACATAG GATAGAAAAT GGACAATAGG AAATAAGACA 60
GTACAGCTAC TAAGAAAGAA CCCACATTAA CACACACACA CACACACACA CACACACACA 120

AGTGTTTAAT CCGCTGCACA GCATTGTGGA CATTTCACCA CAAGAGAGAC ACACCTCTACA 180
GTTTGCGCCC AGCTCTAG 198

(2) INFORMATION FOR SEQ ID NO:12:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 194 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

GATCATTCTT CTGTTTCCCA TTCTAATGGA ATTCTCCACA CACACACACA CACACACACA 60
CACACACTCT TCTTTCTCCT GACATGGAAA AATCTCCCCC ACACCCCGGG ACACTGATT 120
CTCTCCCTCT CCCCAACACT GTGAGCAAGA GGAGTTTATT TTGTGTGTGT CACTCTTCCA 180
GGGAGAGAGA GATC 194

(2) INFORMATION FOR SEQ ID NO:13:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 200 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

CTAGGCATCG GTTGGGAGGT GGTGAGTAAT TACTTGTCTG ACATTAGTCC TGTAACATTG 60
GGTGTGTGTG TGTGTGTGTG TGTGTATTCC CCTTGGGAAT TGGTTTCTC AACCACAAGT 120
TCTTCTTTTT TTTTTTCTC CCCCCCTTTTC TTCTGAAAAT AAGTACTTGG GGGGTTTCCG 180
CCCCCCCCGG TAAATAAAAT 200

(2) INFORMATION FOR SEQ ID NO:14:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 395 base pairs
(B) TYPE: nucleic acid

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- (C) STRANDEDNESS: single
(D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

| | |
|---|-----|
| CTAGTGGCTC CCAAGCAACA CATAGCCAGA CAACACACAC ACACACACAC ACACACACAC | 60 |
| ACACACACAC ACACACACTC CTCTCCCCAC AATACATCCC GAGAGGGGGG AGAGACACTC | 120 |
| TCTCTCCCTC TCTATAGCGG GAGCCCCACA GAGCTGGCTC TGCTGTCTCT CTACACCGGA | 180 |
| CATACAGTGG AGCACATCTC ACATTCTGTG CTCTATCTCT CCCTGCCCT GGTGACATAC | 240 |
| ATCTCTCTTC ACACATCTCA CCAGGTCTGA GCGCTAGAGT CTCCTGTCTT CTCTCTGCGC | 300 |
| AATATTTGTG ATAGAGACAT CTGATATATT GTGTGTGGGA GACATTTGT GAGTCTCTGT | 360 |
| GTGCATCCC AAGGATTTT ATCTCCCCAC ACTAG | 395 |

(2) INFORMATION FOR SEQ ID NO:15:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 447 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

| | |
|---|-----|
| GATCCATGAA AACTTCCGA GTTGTATTGT CTAGGTGAAA ACACACACAA ACACACACAC | 60 |
| ACACACACAC ACACAACAGG GAGATGAGTC TTGCAAGAGA ATAGGGAGA GTTATGTCAC | 120 |
| CAAGTCTGGT GAGGTATATA GCGTATAGGG AGCCAACATG TCAGACATCT GATGTGCTAA | 180 |
| GATTAACATT TTATTTTATT TAATGTGTGA GATCTCATAT AGCGGCTCTT CTTATATATG | 240 |
| ACGTCTCGCA ATGTCTCTTT ATGTGTGTTA TTCTCTGAGC CCCTGGGAGA TATCTGTCT | 300 |
| CAGAGAGAAG AGACATACAC ATACAGGGGT TATATATTTT CTCCCTGTGT GTGGAGATGG | 360 |
| AGGGTATTTT GGACAAGCTC AACACTCATT GGCTCCCAGA GAGAGAAAAG GAGCAACTGT | 420 |
| TGCACCCGGG GCTCTGTAGC TGGGATC | 447 |

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 300 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

CAATTGGGTA CATCTACCTG GTACCCCCACC CGGGTGGAAA ATCGCATGGG CCCGCGGGGG 60
TTCTAGGAAG TACTCTCGAG AAGCTTTGG GTTCTTGAG TCCCAAGCAG CACATGGACA 120
GGCAATCACA CACACACACA CACACACACA CACACACACA CTCCTCTCCC 180
CACAATACAT CCCGAGAGGG GGGAGAGTCA CTCTCTCTCC CTCTCTATAG GGGGCGCCCC 240
TAAGAGCTGG CTCTGTTGTC TATCTACACC GCACATACAA TGGAGCACAA CTCACACTAG 300

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(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 358 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

GATCAAAGCA TGGAGGTCAT GCCAGGCCTT GAACAAAATG GTAGAGAGTG ATTCTATGAC 60
TGACTAAGAC CTCATGCAAC AACAAAGTAA GAGTCACAAC TGCAAACAGA AGTACAACCTT 120
AGCAAATCCT ATTTTCAGGA AACACTAAAC CGTAATACTT GCACGATTT TTCTTTAATA 180
CAGTAATAAT TCTTTTAGAA TTTGGATATA TCTTTAAAGA TACATATTTG TCTAAATACC 240
AAGGCAGGAT ATGAGCATAA AATAGCTAAG GTTAGCTATG GTGTTATATT TAAGAAGACC 300
ACAGAGCAAT AGGAGCATAAC TTTTCTTGGG GTAGAAGGGG CCCTTAAAGG TCACCTAG 358

(2) INFORMATION FOR SEQ ID NO:18:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 289 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

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|---|-----|
| CTAGCCACAT CCTATAACTC CACTCCACCT TTAATCCTGA TTTCTGTGTC TCTTCTCTAA | 60 |
| CCTCTATGGC CTTTCTCTAA AGTTCCCCAA TATCAACAAT CCTTTTCCCC ACTGGGACCT | 120 |
| CCAGTTTATT GATTCTACCA TGTCACTATC CATGGTCAAC CACTTGTGGT ATTATAGGAT | 180 |
| GTCGCGTGTG TGTGTGTGTG TGTGTGCATG TGTGTGTGCT TGGGTGTCAG AGAGTTCCAA | 240 |
| TCTGGGGGAC CTATGGTTTG TAAACAAACAG GTCTCTTGCC AAGGAAGAT | 289 |

(2) INFORMATION FOR SEQ ID NO:19:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 216 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

| | |
|---|-----|
| CTAGCGCTCG TGCCCCTGCA GTTCGACACT CAGTGGCTCC TCCACACACA CACACACACA | 60 |
| CACATCAATA TATATATAGA TAGATAGATA GATAGAGGAG CAATATAAGT GGCTTCTCTA | 120 |
| TTTCCAGCAT GTTTGAAGA GCATAAACTC AACAGAGTAT ATATAATCT GATGTGACCC | 180 |
| ATGTCATCTG CTACAGCATG AGAGGGGGTA GTGATC | 216 |